

**WHAT IS CLAIMED IS:**

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A1
1. A method for deriving enhanced image processing parameters for a source digital image, comprising the steps of:
    - a) providing a source digital image;
    - b) generating at least three rendered digital images from the source digital image with at least one image processing parameter associated with each rendered digital image;
    - c) displaying the rendered digital images on a display;
    - d) selecting two or more of the rendered digital images; and
    - e) using the image processing parameters associated with the rendered digital images to generate enhanced image processing parameters.
  2. The method of claim 1 further including the step of storing enhanced image processing parameters with the source digital image as meta-data.
  3. The method of claim 1 further including the step of using the enhanced image processing parameters and the source digital image to produce an enhanced digital image.
  4. The method of claim 1 wherein the image processing parameters relate to the brightness of the rendered digital images.
  5. The method of claim 1 wherein the image processing parameters relate to the color of the rendered digital images.
  6. The method of claim 1 wherein the image processing parameters relate to the tone scale of the rendered digital images.
  7. The method of claim 3 wherein the image processing parameters

relate to the brightness of the rendered digital images.

8. The method of claim 3 wherein the image processing parameters relate to the color of the rendered digital images.

9. The method of claim 3 wherein the image processing parameters relate to the tone scale of the rendered digital images.

10. The method of claim 1 further including the step of using the image processing parameters associated with the rendered digital images to calculate a tone scale function.

11. The method of claim 2 further including the step of using the image processing parameters associated with the rendered digital images to calculate a tone scale function wherein the tone scale function is stored with the source digital image.

12. The method of claim 1 wherein one of selected rendered digital images is selected at least twice and the enhanced image processing parameters associated with the selected rendered digital images are a function of the number of times of said at least twice selected rendered digital images.

13. The method of claim 1 further including the step of displaying a message on the display indicating that the first selection of a rendered digital relates to the main subject of the source digital image and the second selection of a rendered digital image relates to the background of the source digital image.

14. The method of claim 1, further including the step of selecting a mode button on the display before each selection of a rendered digital image.

15. A method for generating an enhanced digital image from a source digital image, comprising the steps of:

- a) providing a source digital image;
- b) generating at least three rendered digital images from the source digital image with at least one image processing parameter associated with each rendered digital image;
- c) displaying the rendered digital images on a display;
- d) selecting two or more of the rendered digital images; and
- e) using the image processing parameters associated with the rendered digital images to generate an enhanced digital image from said source digital image.

16. The method of claim 15 wherein the image processing parameters relate to the brightness of the rendered digital images.

17. The method of claim 15 wherein the image processing parameters relate to the color of the rendered digital images.

18. The method of claim 15 wherein the image processing parameters relate to the tone scale of the rendered digital images.

19. The method of claim 15 further including the step of using the image processing parameters associated with the rendered digital images to calculate a tone scale function.

20. The method of claim 15 further including the step of using the a spatial filter, the tone scale function, and the source digital image to generate the enhanced digital image.

21. The method of claim 15 wherein one of selected rendered digital images is selected at least twice and the enhanced image processing parameters associated with the selected rendered digital images are a function of the number of times of said at least twice selected rendered digital images.

22. The method of claim 15 further including the step of displaying a message on the display indicating that the first selection of a rendered digital relates to the main subject of the source digital image and the second selection of a rendered digital image relates to the background of the source digital image.

23. The method of claim 15, further including the step of selecting a mode button on the display before each selection of a rendered digital image.

24. Apparatus for deriving enhanced image processing parameters for a source digital image, comprising:

- a) means for providing a source digital image;
- b) means for generating at least three rendered digital images from the source digital image with at least one image processing parameter associated with each rendered digital image;
- c) means for displaying the rendered digital images on a display;
- d) means for selecting two or more of the rendered digital images;
- and
- e) means for using the image processing parameters associated with the rendered digital images to generate enhanced image processing parameters.

25. The apparatus of claim 24 further including means for storing enhanced image processing parameters with the source digital image as meta-data.

26. The apparatus of claim 24 further including means for using

the enhanced image processing parameters and the source digital image to produce an enhanced digital image.

27. The apparatus of claim 24 wherein the image processing parameters relate to the brightness of the rendered digital images.

28. The apparatus of claim 24 wherein the image processing parameters relate to the color of the rendered digital images.

29. The apparatus of claim 24 wherein the image processing parameters relate to the tone scale of the rendered digital images.

30. The apparatus of claim 26 wherein the image processing parameters relate to the brightness of the rendered digital images.

31. The apparatus of claim 26 wherein the image processing parameters relate to the color of the rendered digital images.

32. The apparatus of claim 26 wherein the image processing parameters relate to the tone scale of the rendered digital images.

33. The apparatus of claim 24 further including means for using the image processing parameters associated with the rendered digital images to calculate a tone scale function.

34. The apparatus of claim 25 further including means for using the image processing parameters associated with the rendered digital images to calculate a tone scale function wherein the tone scale function is stored with the source digital image.

35. The apparatus of claim 24 wherein one of selected rendered digital images is selected at least twice and the enhanced image processing parameters associated with the selected rendered digital images are a function of the number of times of said at least twice selected rendered digital images.

36. The apparatus of claim 24 further including means for displaying a message on the display indicating that the first selection of a rendered digital relates to the main subject of the source digital image and the second selection of a rendered digital image relates to the background of the source digital image.

37. The apparatus of claim 24, further including means for selecting a mode button on the display before each selection of a rendered digital image.

38. Apparatus for generating an enhanced digital image from a source digital image, comprising:

- a) means for providing a source digital image;
- b) means for generating at least three rendered digital images from the source digital image with at least one image processing parameter associated with each rendered digital image;
- c) means for displaying the rendered digital images on a display;
- d) means for selecting two or more of the rendered digital images;
- and
- e) means for using the image processing parameters associated with the rendered digital images to generate an enhanced digital image from said source digital image.

39. The apparatus of claim 38 wherein the image processing parameters relate to the brightness of the rendered digital images.

40. The apparatus of claim 38 wherein the image processing parameters relate to the color of the rendered digital images.

41. The apparatus of claim 38 wherein the image processing parameters relate to the tone scale of the rendered digital images.

42. The apparatus of claim 38 further including means for using the image processing parameters associated with the rendered digital images to calculate a tone scale function.

43. The apparatus of claim 38 further including means for using a spatial filter, tone scale function, and the source digital image to generate the enhanced digital image.

44. The apparatus of claim 38 wherein one of selected rendered digital images is selected at least twice and the enhanced image processing parameters associated with the selected rendered digital images are a function of the number of times of said at least twice selected rendered digital images.

45. The apparatus of claim 38 further including means for displaying a message on the display indicating that the first selection of a rendered digital relates to the main subject of the source digital image and the second selection of a rendered digital image relates to the background of the source digital image.

46. The apparatus of claim 38, further including means for selecting a mode button on the display before each selection of a rendered digital image.

47. A computer storage product for storing software for carrying out the method of claim 1 in a digital computer.

48. A computer storage product for storing software for carrying out the method of claim 2 in a digital computer.

49. A computer storage product for storing software for carrying out the method of claim 3 in a digital computer.

50. A computer storage product for storing software for carrying out the method of claim 4 in a digital computer.

51. A computer storage product for storing software for carrying out the method of claim 5 in a digital computer.

52. A computer storage product for storing software for carrying out the method of claim 6 in a digital computer.

53. A computer storage product for storing software for carrying out the method of claim 7 in a digital computer.

54. A computer storage product for storing software for carrying out the method of claim 8 in a digital computer.

55. A computer storage product for storing software for carrying out the method of claim 9 in a digital computer.

56. A computer storage product for storing software for carrying out the method of claim 10 in a digital computer.

57. A computer storage product for storing software for carrying out the method of claim 11 in a digital computer.

58. A computer storage product for storing software for carrying out the method of claim 12 in a digital computer.

59. A computer storage product for storing software for carrying out the method of claim 13 in a digital computer.

60. A computer storage product for storing software for carrying out the method of claim 14 in a digital computer.

61. A computer storage product for storing software for carrying out the method of claim 15 in a digital computer.

62. A computer storage product for storing software for carrying out the method of claim 16 in a digital computer.

63. A computer storage product for storing software for carrying out the method of claim 17 in a digital computer.

64. A computer storage product for storing software for carrying out the method of claim 18 in a digital computer.

<sup>65</sup>  
~~64.~~ A computer storage product for storing software for carrying out the method of claim 19 in a digital computer.

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~~65.~~ A computer storage product for storing software for carrying out the method of claim 20 in a digital computer.

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56. A computer storage product for storing software for carrying out the method of claim 21 in a digital computer.

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67. A computer storage product for storing software for carrying out of claim 22 in a digital computer.

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68. A computer storage product for storing software for carrying out the method of claim 23 in a digital computer.

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \int_0^x f(t) dt$ . It is shown that  $f(x)$  is a continuous function and that it satisfies the functional equation  $f(x+y) = f(x) + f(y)$ .